The Message and the Science:
Media and COVID-19

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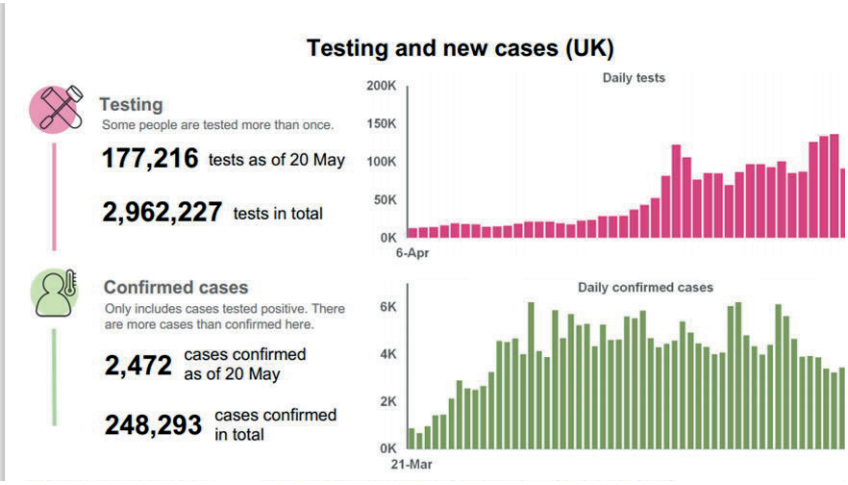
Communication about the causes, cases, counts and mitigation of COVID-19 has resounded in every nook and cranny of global humanity. All units of life have come to depend on the effective media communication of information about COVID-19: households and workplaces, consumption and leisure, politics and economics, and of course health and wellbeing. During the pandemic people came to depend on multiple sources of information, including social media, newspapers, magazines, radio, television, public service announcements, text messaging and government websites. Reliable information and precise messages needed to be communicated by trusted sources on matters such as the nature of the disease, vaccination, test and trace, medical interventions, transmission rates, quarantine, lockdown and physical distancing. Throughout this process the central concern of politicians and public health authorities was that faulty messaging would increase risk while effective messaging would lower it.



Mass testing became one of the key ways in which the government attempted to understand as well as control the spread of the disease.

Here we outline a few of the key issues that the pandemic and the public understanding of science communication pose for media educationalists. First, we consider the reporting of centralised messaging about the pandemic as attempts to exert control over what is taken to be the background noise caused by media distortion of science. Second, the process of assembling and reporting data on COVID-19 is more messy than may be apparent from the confident presentation of the facts. Then we turn briefly to scientific journalism, often not covered in media education as a specific genre with its own vocabulary and conventions. Finally, at the other end of the spectrum, the relationship between social media and conspiracy thinking mobilises its own outsider conventions and codes for contesting centralised messaging and scientific knowledge about the virus ranging from fantastical claims to more plausible ones.

Getting the message right?

Under crisis conditions, politicians and public health officials face continual pressure to perfect how they communicate the underlying facts and their preferred measures for mitigating the pandemic. Politicians routinely claim that they are only 'following the science' while scientists say that they are merely 'following the data' wherever it leads. Psychologists advise the government to provide clearly focused public information to mitigate the risks that we all face. [1] Sending clear messages such as 'Stay Home, Protect the NHS, Save Lives' are essential to let people feel that their leaders are taking control of the pandemic and that the public also have a part to play in the collective interest. By contrast, as lockdown began to be eased the later slogan 'Stay Alert, Control the Virus, Save Lives', was far less clear, bordering on confusing or meaningless verbiage for many people. Without a clear message, it is argued, people will feel a loss of control and levels of fear, distrust and threat may increase. Such a loss of identification with the common good may also make sections of the public susceptible to fantasy images of malevolent establishments conspiring to conceal the truth from the public.

However, the same centrally-controlled message can be subject to radically different interpretations. While an absence of authoritative sources may invite

people to fill in the gaps it may equally be the case that a surfeit of information in the endless reporting of statistics and inane sloganeering in the case of COVID-19 may have other undesirable effects. Even well-focussed centralised messaging can be undone by the media amplification of public fears and threats, as with the notorious example of news reports about the panic buying of toilet paper at an early phase of the pandemic inflamed by journalistic metaphors of a war of all against all. On the other hand, print media across the ideological spectrum in the public interest exposed politicians, scientific advisers and journalists – Dominic Cummings, Professor Neil Ferguson, Dr Catherine Calderwood, Robert Jenrick MP, Stephen Kinnock MP, Margaret Ferrier SNP MP, and Kay Burley of Sky News - for flouting the same restrictions that they were requiring the public to uphold.

Dominic Cummings was forced to give a press conference after for travelling to Barnard Castle during Covid travel restrictions, from BBC.

The effectiveness of the public awareness campaign about the COVID-19 pandemic and required response, depended not only upon slogans but also the communication of the technical discourse of disease transmission. Research in this area on the H1N1 flu outbreak in the US [2] and the Ebola outbreak in West Africa [3] has examined the rhetoric within dominant media coverage. This work emphasises the social construction of risk and reaction. A discourse that constructs response efforts as engaging in a 'battle' or 'war' serve to construct an oppositional form of rhetoric toward the disease outbreak that is also reinforced through technical epidemiological updates on the R (Reproduction) number, percentage test positivity rates, or numbers of positive COVID cases per 100,000 of the population in a given geographic area. This combination of rhetorical and technical discourse is a powerful means of attempting to maximize public compliance through joint political and expert communication. Data visualisation further reinforces these discursive messages through the medium of televised daily briefings' usage of tabular and graphical information. In such ways the public is drawn into the 'fight' against the disease in terms of the health and moral imperative to help 'get the figures down' by adhering to authorised instructions. Statistics and slogans are therefore mobilised to secure a sense of collective legitimacy to achieve the public health goal of 'defeating' the virus.

Of course, official government media communications are not the only sources for the airing of expert information and exhortations about what should be done to 'fight' the virus. Broadcast media in particular, with a remit to ensure balanced reporting in the public interest, was able to forefront expert scientific voices. These included frequent appearances by social psychologist and member of Sage's independent behavioural science advisory group Professor Stephen Reicher, and public health experts Professor Linda Bauld and Professor Devi Sridhar's regular column in The Guardian. Professor Jason Leitch, Scotland's National Clinical Director, not only made frequent appearances on news media but also had a weekly spot on Radio Scotland's programme *Off the Ball*. Self-styled as 'the most petty and ill-informed football show on radio' the programme appeared to some a questionable venue to communicate expert public health messages. Affectionately known on the show as 'the Professor', some listeners complained that the presenters, Stuart Cosgrove and Tam Cowan, were far too friendly, informal and uncritical of his messaging. Yet, as the show's presenters pointed out, their primary role is entertainment, not one disciplined by the rigours of journalistic integrity. The show aimed to provide an accessible context for listeners who routinely tune in for irreverent gossip and humour about football to hear up-to-date developments in a more informal style than standard news reporting.

Expert scientific popularisers engaged in translational communication using blogs and podcasts as well as broadcast media. The long-standing podcast and radio show The Naked Scientists translated the latest scientific findings about the virus from specialist journals for mainstream broadcasters. [4] Dr Chris Smith, consultant virologist and founder of The Naked Scientists, described the way that translational communication migrated to the BBC sports radio station 5Live in the form of a 'common-sense coronavirus call-in':

> 'Never in the history of broadcasting has a pathogen had its own network level radio programme, but several channels quickly turned over their airtime to coronavirus. When 5Live found themselves with three spare hours on a Saturday afternoon, the slot usually reserved for football, we created the common-sense coronavirus call-in.'[5]

Smith and other science communicators were outraged when in March 2021 leading politicians across Europe suspended the use of the Oxford AstraZeneca vaccine,

despite advice to the contrary from the European Medicines Agency, on the basis of a very small number of, and possibly unrelated, cases of blood clots. Smith fumed on the Jeremy Vine on 5 show about what he saw as the opportunistic politicisation of science: 'I'm afraid this has become more a game of politics than a game of science, that's clear'. [6] Attempts to communicate accurately the different magnitudes of the risk of death from the virus compared to the risk of a blood clot from the vaccine were obscured by political grandstanding about the consequences of Brexit in the UK as well as Europe. Despite the mainstream media presence of translational science communicators like Smith and others, scientific findings were wielded selectively, distorted or ignored as ideological weapons in the media politics of the virus.

Follow the data

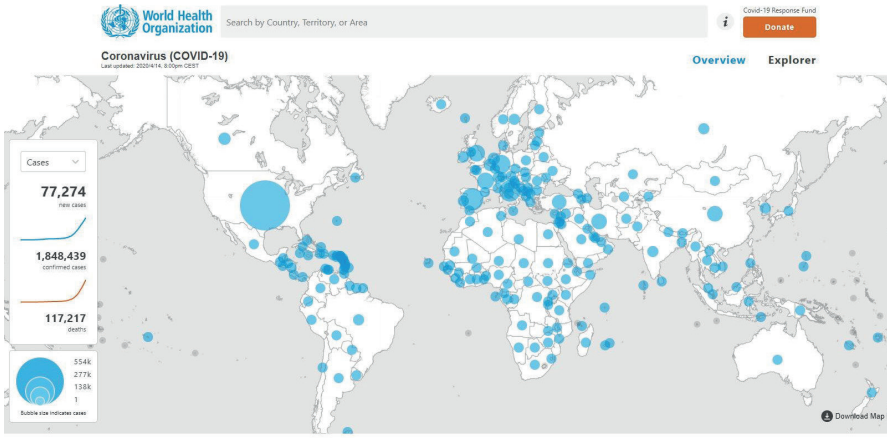
Public sources of COVID-19-related data depend on formal reports from mainstream media of press conferences held by government and public health authorities, and official social media feeds. Audience research indicates that around 85 percent of respondents consistently watched, read or heard about the UK government's daily coronavirus briefings. [7] Collecting and reporting accurate data for COVID-19 involves complex, often lengthy chains of functional interdependencies between various individuals and bodies granted the legitimate right to speak authoritatively. [8] First, audiences depend on the trust they put in the veracity of broadcast and print media reporting; here the BBC remains the most trusted media provider of news. Second, for their part mainstream media depend on data and reports from authorised national and subnational public bodies and their spokespeople. Third, politicians, officials, advisors and chief scientists depend on and interpret information procured from hospitals, labs, care homes, and public health and medical authorities. Finally, all this ultimately depends on the data collection and reporting practices of professionals within these establishments, where practices can vary considerably. As specialists in verbalisation, journalists are able to form judgements about the performative competence of individual politicians and scientists to deliver a clear and consistent message about 'the science'. They also risk becoming enrolled as agenda-builders for centrally-orchestrated messaging about 'the science', implying that it is founded upon a consensual and unified scientific community. Government and public health press briefings at UK and devolved levels, prominently reported across mainstream media, represent the most centralised form of messaging. Politicians and health ministers were flanked at live daily press briefings by chief scientific advisers and medical officers. These staged performances lent credibility to the scientific authority of political decision-making. [9] At a UK level, Boris Johnson's message had been described as 'inconsistent, sluggish and at times confused' in contrast to Nicola Sturgeon's 'consistent and cautious approach [that] at least carried the virtue of being easy to understand'.[10]

A focus on the charisma of individual politicians, however, may do little to enhance the public understanding of science, which in any case became the object of political contention rather than a neutral zone of infallible knowledge. For instance, BBC broadcasts of the Scottish Government's regular COVID-19 briefings between October and December 2020 were the subject of complaints to Ofcom alleging that they breached the due impartiality requirements of the Broadcasting Code. [11] It was alleged that the briefings gave the ruling SNP and the First Minister an unchallenged opportunity to promote party political positions on contentious policy matters in a way that was denied to rival parties. Ofcom rejected these claims of alleged bias and considered BBC coverage in keeping with its public interest remit to provide public health information relating to the pandemic. Politicians were routinely subject to journalists' questions that satisfied Ofcom's judgement of 'sufficient challenge and contextualisation to the First Minister's statements ensuring that due impartiality was preserved'. Publishing its findings was an unusual move for Ofcom, one it deemed necessary to provide clear guidance to broadcasters of where the boundaries lie between public interest and partisan politics depending on format and context.

Nonetheless, political parties in Scotland frequently attempted to make 'the message' politically contentious by challenging the competence of the SNP government's cautious messaging rather than 'speak truth to the science' itself. For example, when the Health Secretary Jeanne Freeman appeared to contradict previous statements by Nicola Sturgeon concerning area-based restrictions on the BBC current affairs programme Politics Scotland the Conservative health spokesman Donald Cameron complained about the 'mixed messaging and confusion from the SNP Health Secretary' while Scottish Labour's health spokeswoman Monica Lennon argued that 'Jeanne Freeman muddled the message and should simply hold her hands up and apologise'. [12]
An excessive focus on 'the message' and 'the science' generates difficulties for creating informed, robust media reporting of COVID-19. On one hand, some claim that official briefings and mainstream media have been under-reporting cases and mortality counts while, on the other hand, sceptics claim that the real figures have been over-reported. Claims about media under-reporting of cases and deaths typically depend on a cock-up theory of unintended system errors caused by rapidly changing medical and administrative conditions. On the other hand, claims on social media of media over-reporting is often viewed as a result of the intentional malevolence of political, scientific and media establishments.

A common way of dismissing unwanted news or knowledge is to categorise it as an unfounded error resulting from distortion somewhere in the process of transmission either as a result of faulty perception or inaccurate reproduction. Even within unitary authority

structures slippages can occur within chains of data reporting at local, sub-national and national levels. While there were highly publicised cases of authoritarian regimes imposing hierarchical controls over the reporting of data in the cause of misinformation, all governments present COVID-19 counts in particular ways and follow well-established repertoires for official forms of communication.



World Health Organisation provided regular digital updates via social media channels, focusing especially on new cases, confirmed cases, as well as overall deaths across the globe. (Credit: WHO, April 2020)

In terms of reporting the cases for different countries, scientists and governments depend on a few core organisations for reliable data, primarily the World Health Organisation (WHO), Johns Hopkins University (JHU) and Worldometer. [13] For the cross-national comparisons, Google's COVID-19 tracker site depends on Wikipedia, which depends on JHU as the core source. Despite being cited in UK government press briefings between 30 March and 14 April 2020 (before it was unceremoniously replaced by JHU data) Worldometer was considered by both scientists and conspiracy theorists as less reputable than WHO and JHU. Its flawed reporting of data and a lack of transparency about data sources troubled scientists while conspiracists mistakenly conflated the US company that owns the site, Dadax LLC, with a Chinese company of the same name based in Shanghai. [14]

Specialist journalism

News journalists generally feel less competent to hold 'the science' to account than to comment insightfully about the verbal performance of politicians as messengers struggling to control and contain a global emergency. [15] The largely uncritical reporting of 'the science', the apparently inviolable character of probabilistic modelling and the solidity of numerical values appears to hold mainstream news journalism in its thrall. It also exposes the relative absence of scientific culture within non-specialist journalism, dominated as it is by people with backgrounds in the humanities and social sciences.

Critics of official scientific messaging like Professor Allyson Pollock and others tend to receive less mainstream media coverage and depend on Twitter, websites and scientific journals such as the British Medical Journal (BMJ), to question public health decision-making. For example, Pollock considered the mass testing of people without symptoms across England at a cost of £100 billion to be an exorbitant, unethical and unevaluated experiment that would have been better spent eliminating child poverty in the UK. [16] Other public health professionals protested in the BMJ that reporting the COVID-19 vaccine trials in press releases before the scientific community were able to scrutinise the data in peer-reviewed journals represented poor scientific practice and could undermine public confidence in the vaccines. [17]

Of the more specialised media sources the medical journal The *Lancet* produced the earliest scientific reports from China in January 2020 and has since been highly critical of government science, with its editor Richard Horton calling the delays, inaction and lack of PPE stocks 'the greatest science policy failure of a generation'. [18] The satirical magazine *Private Eye* was able to produce a fortnightly, well-informed critical commentary by 'M.D.' of the unfolding official ineptitude until it conceded that the UK's vaccine programme was a belated success compared to EU mismanagement and political point-scoring about the AstraZeneca vaccine. Finally, the ubiquitous, heterogeneous and informal sources of personal social media networks have been accused of distorting the main message and helping to spread mass ignorance among the presumed personality deficits and gullibility of online audiences.

The British government were heavily criticised for not providing adequate PPE for frontline workers, from Sky News.

Some scientific journalists disputed the idea that the new coronavirus should be termed a 'pandemic' at all, an infectious disease that indiscriminately puts the whole population at risk, requiring the biological circuits of viral transmission be interrupted and blocked

off. Simple messaging about 'herd immunity' and 'the R number' refer to concepts steeped in theoretical science but have a more uncertain application where the ethical priority of public health is to lessen the unnecessary loss of life rather than to impersonally report an acceptable rate of attrition. [19] Epidemic modellers and infectious disease specialists embedded the pandemic in a centuries-old paradigm of plague control that many journalists accepted at face value.

Expert analyses point beyond mainstream media commentary, which has largely accepted the assumptions of the official biomedical model with mass testing and vaccination as a panacea. As the editor of the *Lancet* put it:

> no matter how effective a treatment or protective a vaccine, the pursuit of a purely biomedical solution to COVID-19 will fail. Unless governments devise policies and programmes to reverse profound disparities, our societies will never be truly COVID-19 secure. [20]

In contrast to mainstream reporting, leading scientific journalists and public health experts termed the new threat a 'syndemic'.[21] A syndemic approach to public health attempts focuses on the mutually-reinforcing nature of the biological and the sociological levels of disease. Two categories of disease – infection with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and a range of chronic diseases like diabetes, obesity, heart disease and high blood pressure – were compounded by chronic social and economic inequalities, particularly affecting the elderly, minority ethnic groups, and poorly paid essential workers, and the related psychological harm that arises from the lowered personal autonomy of dominated groups.

The need to seriously address structural socio-economic inequalities that gave rise to the mutually-reinforcing syndemic has thus far largely gone unacknowledged by mainstream media. Social suffering was exacerbated in the UK by more than three decades of neoliberal policies, a decade of austerity was followed by the worst recorded economic crisis in the history of capitalism. [22]

Going viral: Variants of conspiracy

Social media is itself subject to the language of contamination, not least when it comes to conspiracy theories and misinformation. Social media is compared, often positively, to a disease and neo-Darwinian survival of the fittest. Online messages are said to go 'viral' as gene-like 'memes' ('me-me') mutate among wider and wider layers of users, creating an adaptive 'contagion' of post-truth misrepresentations, manipulated images and hearsay. As also noted of photography during the pandemic, bio-medical metaphors of contamination express something of the relatively unobstructed process of communication afforded by social media. [23]

The shifting, complex dynamics of COVID-19 and the response of governmental and scientific authorities created a gift horse for the circulation of conspiracy theories on social media. Invisible to the naked eye, authority for making knowledge claims about the virus was surrendered to scientific experts, on the basis of which governments restricted hard-won individual freedoms in the name of the public good. Conspiracies thrive on the suspicion that something malevolent is afoot for purposes that are being kept from the public by secretive powerful groups. Outsiders resist the authority of scientific expertise by forming a network with others as a means of compensating for highly uneven power imbalances. On social media speculative fantasy images constructed by an outsider group can be reinforced and amplified in ways that provide insiders with emotional satisfaction resistant to falsification even by established facts. Social media conspiracy theories accumulate the profits of transgression for insiders while lowering the costs of public ridicule.

YouTube, under mounting government pressure, responded to the proliferation of conspiratorial conjectures on its platform by vowing to remove content that contradicts expert consensus, as stated by the WHO and other local health authorities. [24] However, since scientific consensus is not static, and is subject to change in light of rapidly accumulating knowledge regarding the virus, such measures serve to mask the reflexivity that drives scientific discourse and may exacerbate rather than assuage the distrust of scientific authority that animates conspiracy beliefs.

Nevertheless, ambiguous or disputed sources of information are an ordinary part of communication processes rather than a deviation from a transparent or consensual communicative ideal. Conspiracy theories exist on a spectrum from the most outlandish to more plausible claims. [25] Much communication on social media is based on informal rumour, hearsay and gossip. It is a category mistake to treat social media communication as equivalent to formal scientific propositions. The practical judgements of everyday life are different in character from the demonstrable attributes of scientific propositions. Neither should communication on social media be conceived as mere distortions of the seamless transmission of scientific facts. Like all forms of mediated communication social media depends on the verbalisations of individual people responding to each other not the serial transmission of an undistorted message. Collective communication is always formed by shifting and unequal interdependencies, tension and power balances of people who are its medium. The idea of distorted scientific communication on social media presupposes an ideal of undistorted scientific communication. The problem remains one of how to reduce the fantasy content of communication by lowering the barriers across the media landscape for greater public understanding of science.

A growing number have protested against Coronavirus, believing the government's handling of the pandemic to be more about control than protecting the nation's health, from Getty Images.

Notes

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